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ORIGINAL.

PYLORIC STENOSIS IN INFANTS, WITH A REPORT OF CASES.*

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Judging from the increasing number of cases of hypertrophic pyloric stenosis published annually, the conclusion is warranted that this anomaly is by no means rare. The literature of this subject is quite extensive, and has been carefully reviewed by Meltzer, Pritchard, Abel, Nicoll and others.

The clinical phenomena are fairly uniform and typical, and the diagnosis offers little difficulty in the later stages.

After a certain interval from birth, varying from a day to three months, the infant, without apparent cause, begins to vomit. This is usually attributed to simple indigestion, or to some fault in the mother's milk. Under careful regulation of the diet and the administration of antemetics, improvement, if it occurs at all, is only temporary. The vomiting becomes worse and is projectile. Large quantities of milk are thus ejected, more than can be accounted for by the previous feeding. Obstinate constipation ensues. The infant more or less rapidly loses in weight.

The physical signs may be entirely negative in the beginning. A palpable tumor at the pylorus is exceptionallly found. Progressive dilatation of the stomach occurs. On inspection of the abdomen the upper zone will be observed to be bulging, and contrasts strikingly with the depressed lower zone. The bulging of the epigastrium subsides visibly after a paroxysm of vomiting. Peristaltic waves are visible over the epigastrium after the abdominal walls become attenuated.

Examination of the gastric contents reveals the fact that the stomach does not empty itself in one or two hours. In some cases hydrochloric acid is in excess, but more often it is diminished or almost absent.

Coincidently with the gastric dilatation, the signs of gastric catarrh may become manifest. The contents of the stomach show evidences of decomposi-

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tion; the organic acids, lactic and butyric, being present. Large quantities of mucus are vomited, perhaps once in twenty-four hours, or once in two days. The condition of the infant grows steadily worse, the distress is more severe and the fatal issue is inevitable.

Such, in brief, is a clinical picture of this disease in its worst form. Post-mortem the pylorus is found to be very much thickened. The pyloric lumen is stenosed to a varying degree. The hypertrophy at the pylorus is composed principally of circular muscular fibres; but the longitudinal layer, the mucous and submucous coat also partake of this overgrowth. The accompanying table is taken from Batten's article and shows the relative enlargement. Cases I. and III. are normal at the pylorus. Numbers II. and IV. are hypertrophic.

Case	Age.	Method of Preparing	Thickness of whole wall	Whole muscle layer	Circular muscle layer	Long muscle layer	Sub-mucous	Mucous	Lumen of Pylorus
1	16 Weeks	Muller fl. and freezing	1.5 mm.	1.05 mm	0.75	0.3	0.2	0.25	
2	14 Weeks	do do	4.7	3.4	2.6	0.8	0.9	0.4	
		Necropsy	5.25	4.5					3.5 mm.
3	12 mos	Muller fl. and freezing	2.31	1.55	1.1	0.45	0.26	0.5	
4	11 mos	Formol and Celloid'n	4.2	2.9	2.5	0.4	0.5	0.8	
		Necropsy	5.5	4.	3.	1.			4. mm.

The pyloric opening varies in size, but the diameter of the canal at the necropsy is hardly a fair measure of its possible size during life. The muscular wall of the stomach is also very much thickened.

As illustrating the disease in all its severity I herewith give the report of a case which I saw in consultation. The history was kindly furnished by the physician in charge, Dr. W. B. Moore. I also take the liberty of demonstrating the stomach removed at autopsy.

Case I. "The subject of this report is a female child born of healthy parents July 4, 1900. The labor was three weeks premature, but otherwise normal. Five days after birth the child had frequent green stools, one stool containing mucus and a slight amount of blood. There was some tenesmus but no vomiting. The nurse gave a small dose of calomel followed by castor oil, and later one grain of bismuth subnitrate every few hours. A physician was not summoned. Thereafter the baby did well until July 22nd, eighteen days after birth, when it became restless, cried frequently and vomited after nursing. I saw it for the first time the following afternoon. It was small but fairly well nourished and was slightly icteric and the fontanelle was crying as if in pain. The skin was depressed. Inspection of the mouth and fauces showed nothing abnormal. Nothing was found on examining the chest and abdomen. The temperature was normal. The nursing habits were good with the exception that the child was allowed to remain

too long at the breast. The bowels had been evacuated several times, but the urine had not been passed for fifteen hours. The last urine voided showed a quantity of brick-dust deposits on the napkin. The mother was told to shorten the time of nursing. A diuretic was prescribed. The next day the child was quieter, although it was still restless and cried frequently. During the night it had vomited but once, but the mother thought the amount surprisingly large. Two small stools were passed. The passage of urine had been free but the brick-dust stains were still present. On the third day of the attack the child vomited after each nursing. The vomiting did not occur immediately, but was from one to two hours after the nursing. The vomited matter was free from curds and contained mucus. The quantity was such as to attract the mother's attention, who spoke of it as a 'double handful.' The child seemed quite sick before vomiting, but afterwards became brighter and was again eager for the breast. Failing nutrition began to manifest itself. During the day several small dark green stools were passed, which seemed to contain only mucus and bile. The temperature was normal. Potassium bromid gr. v, was given by the rectum, and was repeated in four hours. The breast milk was temporarily withdrawn and a sample taken for examination. On the fourth day Dr. John Zahorsky saw the case with me. The nurse reported that sometime after giving the potassium bromid by rectum a normal yellow stool had been passed. The vomiting had continued unchanged. On examining the abdomen Dr. Zahorsky discovered a tumor in the epigastric region, which was hard and readily escaped from under the intussusception of the transverse colon, but this was excluded by the absence of the characteristic stools and tenesmus. Dr. Carl Fisch reported that the milk contained 4 per cent, proteids. Minute fingers. It gave the impression of an doses of creosote were ordered. Normal salt solution was given by the rectum. In order to dilute the breast milk the mother was ordered to give the child albumen water just before allowing it to nurse. The fifth day the vomiting continued the same; the emaciation was increasing. The tumor which was felt on the preceding day could not be found. One small stool of mucus and bile was passed. The temperature was 99.5 degrees. In order to exclude any infective process a blood smear was examined. Beyond a slight lymphocytosis it was normal. In order to determine the effect of a cathartic, gray powder was administered. After it was given the vomit was bile stained. In consequence Dr. Zahorsky and I concluded that there was an obstruction, from some congenital defect, but owing to the presence of bile in the vomit, that it was located below the pylorus. On the sixth day the symptoms continued unchanged and the emaciation was increased. Dr. E. W. Saunders was asked to see the child and, after considering the symptoms, made a diagnosis of pyloric stenosis, in which Dr. Zahorsky and I concurred. One grain of chloral was ordered to be given by the rectum twice daily. A grave prognosis was made. The parents refused operation, which was proposed, and were unwilling that the stomach tube should be used. On the seventh day it was noticed that the stomach was easily palpable. The lower border was made out by palpation and percussion at the level of the navel. During the

day the child retained two nursings taken two hours apart, and vomited the whole three hours after the last. On the eighth day the lower border of the stomach was found 1 cm. below the navel. The ninth day slight vomiting occurred after each nursing, but in the afternoon the mother reported that enough sour curdled milk was vomited to wet two diapers thoroughly. From the tenth to the fifteenth day the child grew more and more emaciated. The vomiting occurred at longer intervals but in larger quantities. Each day one or two very small brown stools were passed. The temperature ranged from 99 degrees to 102.5 degrees. On the fifteenth day the stomach was plainly visible. Peristaltic waves passed over it at intervals of two or three minutes. There was apparently an hour glass contraction, the stomach bulging on either side, with a sulcus in the middle. The child grew worse until the eighteenth day, when it died in an extremely emaciated condition.

"Permission was obtained to open the abdomen and remove the stomach. The peritoneum, liver and spleen were apparently normal. The intestines were empty. The pylorus immediately attracted attention owing to its almost cartilaginous consistency. The stomach contained an ounce of milky fluid. The mucous membrane was slightly congested, and thrown into longitudinal folds. The muscular coat of the stomach was hypertrophic, averaging 2 mm. in thickness. The hypertrophy was greater at the antrum pylori than elsewhere. A probe 2 mm. in diameter was passed through the pylorus, which began as an abrupt narrowing of the antrum pylori and terminated as abruptly in the comparatively wide duodenum. The length of the pylorus was 2.5 cm. and its muscular layer was 6 mm. in thickness. The mucous membrane of the pylorus was thrown into longitudinal folds. An histologic examination was made by Dr. Fisch, who reported that the hypertrophy was confined to the circular muscular layer of the stomach and pylorus. The other tissues were normal.

"The misleading symptom in this case was the presence of bile in the vomitus. It is evident that the violent contraction of the abdominal muscles during emesis may force a small quantity of fluid intestinal contents into the stomach."

But all cases do not run such a rapid course. The fatal issue may be warded off and the infant may recover. It is my purpose to draw particular attention to these milder cases and discuss their successful management.

Case II.—Baby. Was nursed at the breast for two months. Vomiting commenced when the infant was six weeks old. This hyperemesis gradually became more aggravated. The infant was taken from the breast by the physician then in charge and placed on artificial food. Various modifications of cow's milk and patent foods were used but with little success. At times an improvement would be noticed for a short time, then a relapse would occur. When about five months old it first came under my care. Found an emaciated infant weighing about nine pounds. No pulmonary, cardiac, or nervous abnormalities.

The stomach was enlarged, reaching below the umbilicus. Vomiting would occur after each feeding. Usually small quantities would be successively vomited until most of the food ingested would be lost. No tumor was palpable at the pylorus. Free hydrochloric acid

was not demonstrable in the vomitus by Guinzburg's test. Considerable mucus was present in the vomit at times.

The little patient was put on a whey and cream mixture. It improved for a few days, and then relapsed. Inquiry elicited the fact that the mother was giving 8 to 9 ozs. of milk at each feeding. The stomach was washed out once only, and the quantity of food restricted to 3 ozs. The infant then began to gain in weight and the vomiting gradually ceased. The infant is one and a half years old now and a very well developed child.

The recovery of this patient dates from the time it was put on a whey mixture. The coagula formed by the casein seemed to choke up the pylorus. No medicinal agent was employed except a few doses of chloral at the onset.

Case III.—Baby. Female. Weighed eight pounds at birth. She was breast-fed for three weeks, but did not thrive. A severe mastitis developed in the mother and the attending physician ordered the infant to be taken from the breast and placed on condensed milk. Two days later the patient commenced to vomit. This persisted in spite of treatment. The physician ordered modified milk, Mellin's food and malted milk, successively, but the hyperemesis persisted. Throughout all this time the baby was obstinately constipated. It was then put on peptonized milk, and seemed to improve somewhat. A wet nurse was finally procured, but the vomiting became more violent. For one month this nurse tried to nourish the infant, but it rapidly lost weight until it weighed only five pounds at the age of three months. The physician in charge then discontinued feeding by the stomach, and rectal alimentation only was employed for two weeks. The infant, after this prolonged abstinence from stomach feeding, was able to retain a little peptonized milk. She was five months old when she came under my care and weighed five pounds. The diet was peptonized milk ½ oz. at a feeding, 6 ozs. per diem. I increased the allowance to 1 oz. at a feeding, 18 ozs. per diem. If she took more than 1¼ ozs., she invariably vomited the whole feeding. The thickened walls of the stomach thin wall of the abdomen. I could not could be plainly made out through the be certain that it was a case of pyloric stenosis at that time, because of the absence of dilatation, the symptoms having persisted so long.

The vomiting almost ceased and the infant gained in weight. A wet nurse was procured after some weeks, but her milk caused a relapse. At times, from very slight causes, stagnation of the gastric contents took place, followed by hyperesthesia of the gastric mucous mebrane and pyloric spasm, and the condition of the little sufferer grew worse.

In April a persistent attack of vomiting began. Operation was finally advised, but as the infant improved before she was taken to hospital, it was postponed.

May, 1901, the infant is fourteen months old and weighs ten pounds. She is taking a mixture of 8 per cent. cream with a dextrinized food, gaining in weight, does not vomit, and looks very well. The stomach, when moderately distended, reaches ½ cm. below the umbilicus.

November, 1901.—At twenty months the weight is fifteen pounds, and the child, although a midget, is well-nourished, and has had no relapse for some months. The typical pear-shaped ab-

domen has taken on the normal appearance of infancy, the flank and hypogastrium are well rounded and resonant.

The diagnosis in this case was for a long time in doubt, but the gastric hypertrophy, first observed, followed by a gradual dilatation, the peristaltic waves seen only after the case had been long under observation, the typical shape of the abdomen, placed it finally beyond a doubt.

The puzzling features were the intermittency of the vomiting, and the presence of true diarrhea occasionally at the onset of a relapse.

It seems reasonable that we should recognize a class of cases of pyloric difficulty more or less intermittent in its symptoms, which is clearly not congenital.

In adults we see a prolonged series of attacks of so-called gastralgia,which may be fairly attributed to an irritated pylorus which is thrown into spasm whenever an unwonted chemical or mechanical stimulus is applied, by reason of injudicious diet or indigestion.

This case illustrates the fact that pyloric spasm is a great factor in the production of emesis. Fermentation of the gastric contents with the resultant irritation of the pyloric mucous membrane, increases the spasm.

It is not rare that infants come under observation, who regurgitate so much of their food daily, that their growth is seriously impaired. Possibly many such patients suffer from a thickened pylorus.

Pfaundler holds that pyloric spasm is the principal cause of the symptoms in these cases. Thomson has advocated the theory that hypertrophy is always secondary to spasm. In these milder cases the spasmodic element certainly seems to be the principal factor.

Very interesting are those cases of persistent vomiting associated with hyperchlorhydria. Knopfelmacher has recently reported such a case. In his case the symptomatology was similar to that of pyloric obstruction. Gastric motor insufficiency was also demonstrated. But the diagnostic phenomenon was the presence of an excess of hydrochloric acid in the gastric juice. The infant recovered on whole milk, the casein of which neutralized the excessive acid.

A similar case occurred in the Bethesda Foundling Home, a brief history of which is as follows:

Case IV.—Fannie. She was a healthy infant at birth. When several weeks old she began to vomit after each feeding. She was fed throughout on laboratory milk. At first she was put on a mixture containing proteids, 1; fat, 2; sugar 6 per cent. When about three months old the food was changed to proteids, 1.75; fat, 3.50; sugar, 7. The vomiting persisted for several months in spite of remedies and dietary changes. No enlargement of the stomach was demonstrated. The digested milk vomited invariably gave a strong reaction of hydrochloric acid by Topfer's test. A great excess of this acid was always present after nursing. The gastric contents were so irritating as to produce a severe dermatitis on the neck, which resisted all treatment until the vomiting ceased. The nutrition suffered for a long time. When the infant was nine months old she was placed on undiluted cow's milk and the vomiting almost completely ceased. She is now a healthy baby.

As in the case reported by Knopfelmacher the vomiting ceased on the administration of undiluted cow's milk.

Sometimes in cases which do not improve on raw milk, vomiting ceases when it is heated to 212 degrees. Where whole milk is not borne at all, white of egg will sometimes answer the purpose.

These cases, from the prognostic and the therapeutic point of view, must be sharply differential. Whenever persistent vomiting occurs, the presence or absence of hydrochlorhydria must be established. Patients with pyloric stenosis should be fed by whey mixtures, or fully peptonized milk, while pyloric spasm from an excess of hydrochloric acid, must be treated by an excess of proteid to neutralize the acid. In the case of Baby L., at the age of five months the milk had to be peptonized for forty minutes. No wet nurse succeeded until one was found whose child was thirteen months old and whose milk showed 0.8 proteids.

Dr. Zahorsky furnished me with the history of the following case which illustrates what can be accomplished by careful dieting.

Case V.—Baby F. Male. Age four months. Weighed about nine pounds at birth. The labor was normal. For the first two weeks the baby thrived. About the fifteenth or sixteenth day vomiting set in. The vomiting persisted and became daily more aggravated. The physician in charge prescribed various remedies with little effect. The milk was rejected from ten minutes to three hours after nursing. The bowels became obstinately constipated. The infant commenced to lose in weight, and at the end of four months weighed about eight pounds.

At varying intervals the vomiting would improve. The family physician put it on a variety of artificial foods and milk mixtures, but the vomiting grew worse. Finally he resorted to rectal feeding exclusively and under this method the infant seemed to do best.

The infant came under my care when four and one-half months old. Examinations showed a poorly nourished child, weighing about seven pounds. The face was thin and the skin hung in folds; slept very well, cried little, and passed a considerable quantity of urine. No food had been given by the stomach for twelve hours previous, and during this time no vomiting had occurred. The parents had not noticed any bile in the vomitus at any time. Examination of the mouth, lungs, heart, liver and spleen revealed nothing abnormal. Temperature of the body was 98 degrees. The abdomen was flat, with slight bulging of the lower half, but as a nutrient clyster had been given a short time previously the swelling was attributed to this. When the lower bowel was emptied the swelling subsided. No tumor was palpable in the epigastrium, and no enlargement of the stomach was demonstrable, but later, when the stomach was distended, it was found that the greater curvature extended to the umbilicus. Moreover, it was observed that the upper half of the abdomen was relatively very prominent when the colon was empty. The diagnosis of hypertrophic pyloric stenosis seemed most reasonable.

The infant was given whey, which it took greedily. A little cream was added to this in one or two days, but the addition of cream caused distress, crying and vomiting. The vomitus had the odor of butyric acid. No excess of hydrochloric acid was present. The treatment consisted of rigidly maintaining the whey mixture, which could not form a coagulum in the stomach. As an antispasmodic atropin was given

in doses of 1-1000th of a grain three times a day. This was given for the purpose of preventing pyloric spasm. The food given was pure whey, to which a little sugar was added. To make up the deficiency in fat, 15 drops of cod-liver oil were given after each meal.

The infant improved and commenced to gain in weight. In order to increase the strength of the food, peptonized milk was mixed with the whey. The peptonized milk was gradually increased until the infant took equal parts of whey and peptonized milk representing a mixture of 2½ proteids, 2 fat, and 7 per cent. sugar. The quantity given was at first 2 ozs., which was gradually increased to 4 ozs. Now, two months after beginning the treatment, the baby weighs twelve pounds, regurgitates very little food, seems happy, looks well, has normal passages and continues to thrive. About three weeks ago it passed through an attack of influenza with high fever, but it regained its weight rapidly when the fever subsided. Lavage of the stomach was not believed to be necessary in this case after the long absence of food from the stomach. The atropin was continued only for about two weeks.

PATHOGENESIS.

This is unknown. Cautley believes that the condition is due to a congenital redundancy,or a prenatal overgrowth of muscular tissue.

Thomson believes that the trouble is a functional disturbance of the nervous system leading to a spasm and secondary hypertrophy of the pylorus. Pfaundler claims that the condition is primarily a spasm, and the hypertrophy is overestimated on account of the extreme contraction. As has been said, "It seems reasonable to combine these views so far as to believe that there is some congenital hyperplasia of the pyloric sphincter and that spasm supervenes upon this, and is largely responsible for the symptoms manifested."

TREATMENT.

Medicinal and dietetic measures should in all cases, be first employed. The indications are as follows:

First,—The administration of some medicinal agent which shall overcome to a greater or less extent the violent contraction of the pylorus. Among the drugs to be recommended are belladonna, bromids and chloral. In case No. 1 chloral had only a temporary effect; atropin seemed very successful in case No. 1. Opiates should not be given, as the motor function of the stomach is thereby impaired.

Second.—The treatment of the secondary gastric irritation. This results from the stagnation of food and should be treated by washing out the stomach, and by giving the stomach rest; rectal feeding should, therefore, be resorted to from time to time and for twenty-four hours, nothing but water given by the stomach. When food by the mouth is again allowed, the stomach should be washed out occasionally to remove a possible residuum of undigested food.

Third.—The diet of the child should consist of food which forms no coagulum in the stomach. This point had not been sufficiently insisted upon. Milk or any food containing undigested casein will not answer, consequently the mother's milk is usually unsuitable, while the milk of a wet nurse in advanced lactation will succeed. Whey or peptonized milk or a mixture of both is generally the best food. The deficiency in fat should be supplied by cod-liver oil. A very small percentage of cream can be gradually added. If the coagulum formed by the cream causes

distress or increases the vomiting, it must be completely predigested. A mixture of whey and predigested milk perfectly agreed with the patient last named. It is well to aid the motor power of the stomach by gravity, hence, after nursing the infant should be placed on its right side. If the diet is perfectly fluid some nourishment will pass through the pyloric opening.

The end to be accomplished is hypertrophy of the gastric wall without dilatation, hence the quantity of food should not be large. Gaseous distention of the stomach should by all means be prevented. I cannot agree with Meltzer, who advocates giving large quantities of milk in the first stage. This must inevitably lead to ectasia. A stomach is not stronger when over distended.

When it is seen that the infant is failing in spite of rational treatment, surgical intervention must be advised.

As to the method of operation, we must leave the decision entirely with the surgeons, until sufficient material is furnished on which we can base some conclusions.

Schmidt has added a third case to the two successful operations recorded by Nicoll and Abel respectively. He performed a digital dilatation,but whether he opened the stomach, or simply invaginated the wall, as advised by Hahn, the reporter does not say.

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ABSCESSES, ADENOMAS, ADIPOSE TUMORS, ANEURISMS, CALLOSITIES, HEMORRHOIDS, TORTICOLLIS, SPECIFIC AND MALIGNANT DISEASES OF THE RECTUM, AND ULCERATIONS.

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THE TREATMENT OF HEMORRHOIDS—PILES.

If the pile be external and a clot has formed, the tumor must be opened and the clot turned out. If of recent date and the clot not formed, a needle, connected with the galvanic anode should be inserted and a current of five to ten ma. used for ten minutes, or until blanching takes place. The clot may then be taken out or the tumor left to nature. It should be dressed with soothing ointment, containing cocaine, to prevent too much reaction. Internal tumors may be treated in the same manner. A four per cent. solution of cocaine should be injected into the pile tumor a few minutes before operating, as a stronger current can then be used, and the clot formed in a much shorter time. The after treatment will be the same as for external piles.

I have successfully applied the galvano-cautery to hemorrhoids. Use a small knife and make light, quick touches to the tumor, having the knife at a dull red heat. If too hot, it will burn through the coatings of the tumor and a hemorrhage will result. The multiple touches causes the tumor to shrivel and disappear.

When operating with the anodal needle,the current must be reversed for

a few seconds before attempting to remove the instrument. The current should be turned on and off quite slowly, so as to avoid shocks.

Faradization has been recommended in the treatment of hemorrhoids, but the writer has not seen any appreciable benefit from its application.

A little caution is necessary when acting in the rectum, as the stimulation sometimes causes an uncontrollable desire to defecate. Previous to all such operations see that the bowels have been well emptied before operating.

The methods of treatment just given are absolutely free from danger, and may be carried out at the office, and the patient allowed to go immediately home, or about the usual occupation, provided with the cocaine ointment as above.

TORTICOLLIS.

This affection, if of long standing or congenital, gives negative results as a rule. It partakes of the nature of a paresis and a spasm. If the latter element predominate, quicker results may be expected. In either case, electrical treatment should be instituted and faithfully carried out. "The affection has its real seat in spinal accessory nerve,or in those motor filaments that innervate the sterno-cleido-mastoid and trapezius muscles." (Bartholow.)

The affected muscles are tense,rigid and frequently painful. The antagonistic group is correspondingly weak and relaxed. The object of treatment will be to strengthen the weak muscles and cause a relaxation in the ones that are at fault. The flabby ones are to be aroused by the action of the faradic current, causing a succession of quick contractions for five minutes at a sitting, being careful not to tire them. Use the primary current for the purpose, having the whole coil in action, i. e., remove the cylinder covering the coil,and control the effect with the rheostat.

For the contractures we will use the galvanic cathode, as we want the relaxing effect of this pole.. Go over the affected area with a current intensity of ten ma. or even more, as the patient becomes accustomed to the applications, and stimulate the circulation while reducing the contractures. A roller electrode is very useful in such cases.

We must not expect too much from our treatment. If the case be one of long standing, degenerative changes may have taken place in the nerve supplying the muscles, which we may not be able to overcome. If the affection be recent, or of rheumatic origin,we may expect good results.

In addition to the local treatment, pass a gentle current through the brain and medulla, by placing the electrodes on each side of the head, back of the ears, and then a little farther back and down, so as to reach the medulla as nearly as possible. Use a current of three to five ma. If vertigo be caused, lessen the current and continue the application for five to ten minutes. The cause of this vertigo has already been explained.

The static spark is of great advantage in torticollis, applied to the weak side. Use a mild spark, for five to ten minutes, alternating such treatment with the galvanic and faradic applications.

It is very easy to overdo in these cases. The patient is anxious for recovery, and the doctor wishes to make a good impression, and frequently yields to the solicitation of the patient to use stronger current, often to the detriment of the case.

There is an error that I wish to call attention to, and that is the statement

made by some writers, that a mild current, long continued, has the same effect as the same amount of electricity applied in a short time, i. e., 5 ma. applied for ten minutes, equalling a total of one hundred ma. would have the same effect as 100 ma. applied for one miuute. This, in the very nature of things cannot be true. A moment's reflection will show the fallacy of such a claim. Great and irreparable injury has often been done to an injured or enfeebled nerve by a powerful current of electricity. Especially is this the case when dealing with paretic or paralyzed muscles. I also have noticed the broad statement that the rule in treatment any paralysis is to use the current that will give the strongest contraction. Now we do not want to always produce a contraction of a muscle, and in every treatment of any given case. We must treat each one individually, and not proceed upon such a broad basis. As before stated, it is absolutely essential that the muscles be not fatigued. In torticollis and allied affections this may very easily be done. As the muscles become stronger, more vigorous applications may be made. If the spinal cord be involved, or there be a central complication, regular brain and spinal applications must be made, but there will be, as a rule, little progress made.

DISEASES OF THE RECTUM. SPECIFIC DISEASES.

Syphilitic ulcers of the rectum. These should be noted upon with the anode, using a zinc electrode for escharotic and chemical effect, being careful not to overdo. Use a small electrode, introduce it through a rubber speculum, using a current of ten ma. for sufficient time to thoroughly change the appearance of the part to be acted upon. Cocaine may be used if necessary. In extensive ulceration it may be necessary to use a strong current and freely cauterize, or use the cautery. The extent and condition must be the guide in operation. Weak currents and somewhat prolonged applications, will, as a rule, promote healthy granulations.

FISTULOUS TRACTS AND SINUSES.

The proper treatment is to act upon the whole tract with the galvanic cathode, using a small electrode, insulated to within a half an inch of the end. A copper wire may be used. Insert it, turn on ten to twenty ma. of current and act upon the whole tract if not too long. If the sinus terminate in an abscess, this must be evacuated and treated as directed under the head of "Abscess." If the sinus be long, only a part, and that at the innermost portion, should be acted upon at a sitting, and allow that part to heal before attempting to close the canal below it; otherwise, an abscess may form. If the fistula be complete, find the inner opening, pass the electrode up through the whole length if possible, and close the whole by adhesive inflammation following the electrolytic action. The anode will be preferable for this, and the whole of the wire must be bare excepting that portion engaging the skin, if the sinus opens externally. Change the polarity just before attempting to withdraw the electrode. If you cannot close the whole tract, work from above downwards, and not from below upwards. It will not be necessary to wash out the tract after using the current.

FISSURES IN ANO.

Wash the parts and act upon the whole surface of the fissure with a suitable electrode, using a cathodal current of five and not over ten ma., repeating the operation, if necessary, as soon as

the reaction has subsided. Every part of the diseased surface must receive attention, and the work thoroughly done. One case that may be mentioned, that of a gentleman from Washington, D. C., came to the writer complaining of an annoying fissure, saying that he had not time for regular surgical treatment. A five-minute application of five ma. of current with the cathode, using a silver probe as an electrode, completely relieved him. Upon his next visit, two weeks afterwards, I found the fissure to be entirely healed.

The effect of the current in such cases is to first destroy the outer surface of the fissure, searing it over, thus protecting it and stimulating it to healthy granulation. In making all such applications, give ample time for the parts to heal before attempting another. If this precaution be not observed, and the parts are but partially healed, the electrolytic effects of the current will remove the partially formed new and healthy granulations, and retard the healing process. The same precaution is to be observed when the cautery is used. A week or ten days, or even two weeks, had better be allowed between treatments, than a shorter period. In some of these cases a single treatment will suffice, as in the case above cited.

MALIGNANT STRICTURE OF THE RECTUM—CANCER.

Pathology. Cancer in all its forms may occur in the rectum, but the variety of epithelioma known as the columnar of adenoid, is the most common. It occurs as either a fungating, more or less distinct tumor, projecting into the lumen of the bowel, or as a laminar, nodular, or ring-like infiltration of its coats. In either case, it is at first covered by apparently unaltered mucous membrane, which sooner or later is destroyed by ulceration, leaving an ulcer with an uneven, proliferating, or excavated surface, everted edge and indurated base. As the disease extends it involves the muscular coat, and subsequently the surrounding structures and organs, gluing them as it were to the rectum, and finally converting the whole into a cancerous mass. The lymphatic glands in the pelvis, and later the inguinal glands and others more remote become affected, and carcinoma may finally be disseminated, secondary growths being more especially found in the liver.

The symptoms are often very insidious. At first there may merely be some uneasiness, hardly amounting to pain about the anus; then more or less pain on defacation is noticed; the feces may be streaked with mucus or blood, and a slimy discharge may be present. Later, the passages become small, flattened, pipe-like or scybalous. The patient strains severely at stool, and says he feels as if the bowel had not been emptied; then there is constipation alternating with diarrhea, and a sanious, offensive discharge. Emaciation and cachexia now appear, with more local pain; and the patient finally succumbs to exhaustion, peritonitis or from an obstruction of the bowel.

The diagnosis can only be made by careful examination. The anus generally appears to be healthy, but it may be patulous, a healthy strip of mucus membrane generally exists between the anus and the growth. When the indurated base of the growth can be felt, and when ulceration has occurred, and the everted edges of the ulcer and the foul discharge renders the diagnosis an easy one.

The fungating form may be mistaken for a villous growth; the annular for

a simple fibrous stricture. A villous growth may be distinguished by its velvety feel, by its not ulcerating or breaking down; by the absence of induration; by the discharge being thin and mucoid; by the rectum not being fixed, and by the duration of the disease.

A fibrous stricture may be known by its longer duration; by being less indurated than the cancerous form; by the bowel not being fixed, and, when due to syphilis, by the absence of a healthy strip of mucous membrane, previously described.

Treatment. The growth, with the infiltrated tissues, as far as possible, must be acted upon with a metal anodal electrode, and all diseased portions removed,the patient being under an anesthetic. Use a large dispersing pad on the back or abdomen. Divulse the sphincter, bring the growth into view with forceps, and remove by electrolysis and cauterization, all of the diseased tissue. Better do too much than too little, although care must be exercised not to go through the walls of the rectum. It may be thought better not to attempt to remove all of the involvement at the first sitting, but to defer a portion to a subsequent period,owing to fear of too great reaction. Repeat the operation in two to four weeks, or when sufficiently healed. A current intensity of one hundred or more ma. will be required for such work.

The effect of the electric current upon such growths is germicidal as well as electrolytic. The low form of cell life in cancerous tissue cannot resist the destructive influence of strong currents of electricity, even when the electrodes do not come into actual contact with all of such tissue, but the effect is felt throughout the interpolar region.

Dr. Byrne, of Brooklyn, uses the electro-cautery in the treatment of these and other malignant growths, and with good success.

How do such operations compare with ordinary surgical procedure? Without entering into any lengthened discussion regarding the question, I will say that considering what has already been stated as to the germicidal action of the galvanic current, and also the effect of the cautery heat upon the low order of life in these growths, it would seem apparent that if the statements are true, —and who can refute them?—the balance is in favor of some one of the forms of operation by means of electric current. I must not be understood to say that the electro-cautery is a means of applying electricity. It is heat, and heat only, but it is supplied by the electric current. Furthermore, the experiences of Parsons, Massey, and a large number of other operators, sustain the claim. If syphilitic growths are found about the anus, they may be readily removed either by the needles or the cautery loop. Should an epithelioma be found in this region, it may be treated in the same manner. Villous tumors, papilomas, and in fact any and all tumors incident to this locality may be acted upon in the same way. If the pedicle be small, the cautery loop will serve the better purpose. In operating with this instrument care must be exercised not to have the wire too hot. If too great a heat be used, the tissues are burned throug too quickly; the mouths of the blood-vessels are not sufficiently closed, and secondary hemorrhage is almost sure to follow. The same precaution is to be observed in operating with the hot platinum wire, no matter in what locality. If an ordinary red-acid cautery battery be used,

see that everything is in perfect order—good, fresh fluid, clean plates, close and proper connections and easy manipulation. Test the degree of heat and notice how deeply the plates must be immersed in order to heat the loop to a dull red. The plates must be immersed slightly more than this, when operating, as more heat will be required when the knife is buried in the tissues, than when being tested as above. Pass the loop around the growth, the patient being under the influence of an anesthetic, draw the loop closely to the skin and slowly immerse the plates until the wire is sufficiently heated to gently cut its way through the tumor, gradually tightening the loop as you proceed. Keep the wire at the right temperature by adjusting the plates to your requirements. If the tumor be a large one, the wire may be passed through the centre of the pedicle by means of a suture needle, and one half of it be operated upon at a time. If the tumor be suspected as to malignancy, cauterize the seat after removal, doing it thoroughly, leaving no diseased tissue untouched by the cautery.

It will be well for those unfamiliar with such work, to operate on the cadaver, or pieces of fresh meat; or, upon anesthetised animals, who should be killed immediately, if much has been done. More will be learned in a few hours experimentation, than by studying books by the month.

If the needle operation be preferred in any of these cases, it should be done as follows: Have the battery, meter, controller, indifferent electrode and needles in perfect order by previous tests. If a small tumor is to be acted upon, no anesthetic will be required, unless cocaine be injected. Place the indifferent electrode in position and thrust two or more needles into the tumor at its base, just above the healthy skin, completely transfixing it, the needles being one fourth of an inch apart. Gently turn on the current carrying it up to fifteen or twenty ma., and let it run for ten minutes. Turn off the current and insert the needles in another direction if necessary. Remember what has been said regarding the use of steel and platinum or gold needles, in such operations, and the action of the poles upon such metals. If the tumor be very vascular, use the anode, but if not, the cathode.

Dress with iodoform or aristol collodion and wait for a few days, when the tumor will either drop off or may be easily removed with the fingers. It may be advisable not to operate so effectually at one sitting, but make a second trial in a week. The reaction will be less, but where time is an important element, do the work thoroughly at once.

There is one element that especially recommends this method of operating upon growths of any kind, and that is the immunity from the danger of erysipelas resulting from the wound. Such a sequel has never been known. No especial care is required as in ordinary surgery. The parts may or may not be washed previous to the operation. The current is sufficiently antiseptic to prevent infection.

After the tumor has been removed, go over the seat of the growth and remove any parts that may have escaped the first operation. This should be done with a cathodal needle, and then cauterize the whole surface, using a carbon electrode for the purpose. Dress as above. The parts will rapidly heal.

The statement has been made that sloughs produced by strong electrolytic action were very difficult to heal.

My experience has been to the contrary. I have found that such wounds heal quickly, provided the patient be in a reasonably fair condition. At the same time, it will be better not to produce a slough unless absolutely necessary,just as you would not make a severe wound with an ordinary knife without cause.

Another fallacy that should receive some attention is, that electrical applications hasten the growth of a cancerous tumor, and should not be made. Everything will depend upon what is done and how it is done. Use strong currents in such cases and kill the growth at once, provided you are sure that it is a cancer you are dealing with. If in doubt, and the matter cannot well be definitely settled, treat the tumor by cataphoresis, and you may have the satisfaction of seeing it disappear. This has been my experience in a number of cases.

While I am reasonably enthusiastic regarding the use of electricity, both medically and surgically, I am still somewhat conservative, and resort to regular methods,when,in my judgment, they are preferable. The fact remains, however, that in many cases and conditions, even where there may be objections to its employment, its safety and convenience would decide in its favor. Many operations that are inadmissible under the old methods may be safely performed by the skillful electro-surgeon. With increasing knowledge, better appliances and an educated public sentiment, a grander future lies before us.

ULCERATIONS.

We have two general forms of ulceration with which to deal, with various subdivisions: (a) Ulcers whose character depends upon their local condition, and (b), ulcers whose character depends upon a specific origin. Under (a) we have the simple, healthy, or healing ulcer, which requires but little treatment, such as the exuberant or fungous ulcer; the edematous or weak ulcer; the sloughing; the phademic, the chronic, the callous, the indolent, the varicose, the ecezamatous, and the irritable or painful ulcer. Under (b) we have the strumous ulcer; the syphilitic, which appears as superficial and deep, the gouty and the scorbutic, lupoid, epitheliomatous, rodent carcinomatous and sarcomatous ulcers also come under the latter heading.

Exuberant or Fungous ulcers. These are due to undue contraction of the tissues, as seen after a burn. The edges are healthy, but the granulations rise above the surface. They bleed easily, and there is purulent discharge. The safest and most radical method is to reduce the exuberant granulations by applying the galvanic anode with zinc electrode. Electrolize off the so-called proud flesh with a current strength of ten to twenty ma.; and do it thoroughly, using cocaine if necessary. One or two such applications should be sufficient as a rule.

Edematous ulcers. These are generally the result of too long a use of poultices, and the cause being removed, gentle stimulation with the cathode, using two to three ma., will cause a rapid improvement. A sub-variety of ulcer may be termed the inflammatory ulcer. It may belong to any class above mentioned, and are to be treated for inflammation,first,and for special characteristics afterwards. A mild faradic, secondary current, applied with the anode by means of a large, soft pad will be found very effective. Treat daily, for five to ten minutes.

The Sloughing Ulcer. This may be

specific in origin, but is also a severe form of the inflammatory variety. Treat the inflammation as just laid down, and later, stimulate healthy granulations with the galvanic cathode.

The Phagadenic Ulcer. This should be thoroughly cauterized with a strong cathodal current, fifty to seventy-five ma.; or by the galvano-cautery. Let it be done deeply, as the condition is due to a specific micro-organism, which must be entirely destroyed. The patient must be under ether.

Chronic, Callous and Indolent Ulcers. Electrical treatment consists in applying static sparks to the eczematous skin around the ulcer and to the limb. Act upon the whole surface of the ulcer with the galvanic cathode, using five or more ma.; for five to ten minutes, with daily sittings. If such treatment be not convenient, cut a disc of zinc the size of the ulcer and place it on the ulcer. Also place a piece of copper on the healthy skin and connect the two plates by means of a wire or thin strip of metal, bandaging them firmly in position, and allow nature to carry on the work for an hour or two at a time. If left on for too long a time the parts will become quite painful, especially if the skin under the copper plate be moist. If the skin be dry, cover the copper plate with flannel and moisten it with vinegar. This also makes a most excellent method of acting upon the stiffened joints, where long continued treatment is necessary.

Varicose and Eczematous Ulcers. Dependent as these are, upon a varicose condition of the veins, the treatment must be directed to the cause and that removed if possible. (See Aneurisms.) This done, the ulcer and eczema very readily yields to treatment. As before stated, the application of static sparks will prove very beneficial in these conditions.

Irritable and Painful Ulcers. These terms are generally restricted to the description of anal fissures, etc., which have already been considered.

ULCERS WHOSE CHARACTER DEPENDS UPON THEIR SPECIFIC ORIGIN.

Strumous Ulcers. These are generally due to the breaking down of tuberculous lymphatic glands; the bursting of subcutaneous strumous abscesses, or the ulceration of the so-called strumous nodules, etc. This class of ulcer was considered under the treatment of tubercular abscess, which see.

Syphilitic Ulcers. Treat the same as for phagadenic ulcer. If inflammatory, first subdue that condition and then proceed. Of course, local treatment of any character will not alone be curative but the question of ordinary medical treatment, lying outside of the scope of these papers, will not be considered.

Lupus Vulgatis. This form of ulcer is tuberculous in character and very intractable unless early attention is given it. Later on it invades the deeper layers of the skin, the whole being destroyed unless the disease can be checked. It is very slow in growth, the patient often suffering for years. A case that has been under the writer's observation for some years, and under his care for a time, has suffered for about thirty years. It covers the entire face, the right shoulder, axilla, and adjacent parts, and is also found on other portions of the body. Encouraging results were reached in this case by electrical applications with the galvanic cathode, excepting where bleeding ensued, when the anode was used. The infiltration and disfigurement were so extensive that destruction

of the tuberculous tissue was not attempted. Professor Shoemaker, who referred the case to me, requested me not to attempt to obliterate the tubercles with electrolytic needles, as he said that while I might destroy the tubercles and arrest the disease locally, it would manifest itself in the lungs, as it had threatened to do when he had healed the ulcerations by the application of strong carbolic acid. There was little discomfort and much improvement under the galvanic treatment. A current of two to five ma. was used on the lesion, treatment being given every other day, for fifteen minutes at a sitting. An ordinary electrode was used, the covering of absorbent cotton and canton flannel, being thrown out at the close of each treatment.

Another severe case came under my care not long after, that of a gentleman from a distant city. The whole face was involved; the nose partly destroyed, and one ear entirely eaten off by the disease. The patient wore a handkerchief as a veil to hide the hideous disfigurement. The surface bled very easily. There was also a large patch on the inner aspect of the right thigh. But little was attempted in the case Gentle applications of the galvanic anode, however, gave him much comfort, but no lasting benefit. Taken early, and before the disease has made any deep impression or become constitutional, it should be cured by electrolytic applications, combined with proper constitutional treatment. X-Ray treatment is now being used in this condition with good success.

Epitheliomatous Ulcers. These should be seen early and promptly removed before secondary manifestations are possible. If on the tongue remove the whole of the diseased tissue and some of the healthy tissue as well. This may be done with the cautery loop. Pass the wire through the member, it being firmly held in position, and remove one half at a time. Observe the same precautions as in other cautery work. i. e., do not have the wire too hot, but hot enough. This is especially important in this operation as the tongue is a very vascular organ, and will require especial care in sealing the blood-vessels.

Epithelioma of the face or other parts is to be removed by electrolysis, unless the involvement be too great, when the method of Dr. Massey should be resorted to. If small, and on the face, for instance, the technique will be as follows: Transfix the growth with two or more needles, connected with the cathode, and turn on ten to fifteen ma. and act upon the tumor for ten minutes. Remove the needles, reinsert them in the other side and proceed as before. Dress with aristol collidion and let it alone for one week, when the operation may be repeated if necessary. If quite thoroughly done at first, it will be ready to come off at the end of the week. If not, make another application, trying to reach any point not previously touched. Dress as before, and await results.

When the blackened mass finally comes off, act upon the site of the tumor with a zinc or carbon electrode, thoroughly cauterizing the whole surface, applying cocaine as in similar applications. Should there be a recurrenc, which is not likely, repeat the operation, doing it more carefully, if possible, than at first. The X-Ray is also to be used subsequent to operation to prevent a recurrence.

Carcinomatous and sarcomatous ulcers are to be treated in the same manner, early extirpation by electrolysis be-

ing earnestly advised. I have, however, held such tumors in check and even reduced them very much in size by persistent application of the galvanic current, combined with the faradic current,to assist in reestablishing the equilibrium.

NEURALGIA AND HEADACHE CURE

Some time ago Naegeli announced that he had very frequently caused almost immediate cessation of cephalalgia and facial neuralgia, as well as forms of long continued odontalgia, by simply elevating the *os hyoide,* or what amounts to the same, the larynx, and holding it well upward for sixty or seventy seconds. This frequently requires to be repeated several times, but quite as frequently one single attempt will prove successful. The writer has had several opportunities to test the truth of Naegeli's announcement, and in every instance in which the plan was followed, relief was almost instantaneous. The fact deserves to be more widely known than it seems to be.—*Public Health Jour.*

NEURALGIA. AMMONIUM MURIATE.

Muriate of ammonium has come up again as a remedy for neuralgia, owing to a case who had been suffering with the complaint of the head, neck, etc., for three weeks, without finding relief from the usual remedies. His sufferings at night especially were terrible. Twenty-grain doses of this solution relieved him at once. He obtained rest the first night. Dr. Green, in the *Medical Press,* London, says "Chloride of ammonium is a very simple, most reliable and strangely neglected drug which I have never known to fail in the treatment of neuralgia."—*Med. Summary.*

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ORIGINAL ARTICLES of practical utility and length are invited from the profession. Accepted manuscripts will be paid for by a year's subscription to this journal and one hundred extra copies of the issue in which such appears if desired.

Editorial.

THE USE OF CARBONIC ACID GAS AS A REMEDIAL AGENT. MEDICINAL WATERS.

The use of Carbon Dioxide as a remedial agent has been presented to the profession from time to time by prominent writers, notably by Prof. A. Rose, M. D., of the Post Graduate School of New York. In an article published in *The Post Graduate* of May, 1902, Prof. Rose describes the various methods of applying the gas, and specifies the disorders in which it has proven to be especially beneficial. The methods of use are by baths and douches, and the place where these were carried out under the doctor's observation, was at a Sanitarium in Franzenbirg, Austria, the

waters there being highly charged with carbon dioxide.

When giving the full bath, the patient is immersed in the gas, the head only being kept above the line. As the gas has a specific gravity of 1.52, it can be easily utilized in this manner. The clothing may or may not be entirely removed, as the gas readily penetrates light fabrics. "The first sensation of the bather is that of warmth, beginning at the thinnest layer of the epidermis, such as on the scrotum. This warmth gradually extends, by reason of the penetrating power of the gas, over the whole surface exposed to its action, changing by degrees into a piercing or prickling sensation. As the gas is cool, this sensation of warmth is not brought on by the temperature of the gas, but in consequence of the intense irritation which it produces upon the peripheral nerves, followed by increased circulation in the capillaries and manifested by a reddening of the skin." The bath is highly recommended in rheumatism, neuralgia etc., and in impotence in the male, or sterility in the female, as it has a most pronounced effect upon the genitalia. In amenorrhea it is considered to be a specific.

The gas is applied by the douche in catarrh, otitis, torpid ulcers, and in ulcers of the rectum, as well as in other suppurating conditions. Most excellent results were reported in all of the above conditions. The gas may also be used as an inhalant in asthma, whooping cough, and in hiccough. It is, however, an exceedingly poisonous gas, being deadly in the proportion of only five per cent. in the air, if one be compelled to breathe it. The best results from its use would seem to be in the baths and douches as outlined by Dr. Rose. The method is well worthy of a trial in this country. The gas can be easily obtained, but it should be of a pure quality.

The only dry, pure carbonic acid gas well in the world, is situated at Saratoga, N. Y., and is the property of the Lincoln Spring Company. We had the privilege of inspecting the gas well and the spring, while attending the meeting of the American Medical Association, held at Saratoga in June last. The gas well has a depth of nearly one hundred feet delivering the gas at a pressure of eighteen pounds to the square inch. The gas is of exceptional purity, and is passed from the well through powerful condensers which reduce it to a liquid, when it is drawn into suitable cylinders and shipped to market. It was extremely interesting to watch the progress of condensation, i. e., as much as was possible, and to note the extremes of temperature during such condensation, and the degree of cold developed when the liquid gas was suddenly liberated from the cylinder, a substance looking not unlike snow was formed, which was intensely cold to the touch.

The gas from these cylinders could be very readily used for bath purposes, in its dry state, or by charging water for the same purpose, as such baths are highly spoken of by Dr. Rose, as well as by the authors of the ninth volume of the "System of Physiologic Therapeutics," (Cohen.) Such baths produce the same effect as the dry bath, but in a lessened degree.

Medicinal Waters are, however, of more practical use to the general practitioner of medicine, but in order to get the best results the products of Nature's Laboratory only should be used. In this connection we desire to call attention to the water supplied from the Lincoln Spring, at Saratoga, N. Y.

This spring furnishes a high grade alkaline-magnesium-lithia water, holding in permanent solution these as well as other minor salts, and being strongly impregnated with carbon dioxide. The water is pleasant to the sight, the taste and smell. It acts as a diuretic, is mildly aperient and generally corrective.

This water has proven to be of great value in the treatment of rheumatism, dyspepsia, Bright's and other diseases of the kidneys, and of especial value in diabetes. W. H. W.

THE KYGER RESOLUTIONS FOR THE ABOLITION OF THE NEWSPAPER PUBLICATION OF PERSONAL MEDICAL ADVERTISEMENTS.

In a paper read by Dr. J. W. Kyger, before the Kansas City Academy of Medicine on "The Decadence of the American Race," it was deemed of sufficient importance to appoint a committee to draft resolutions expressing the feeling of the regular medical profession in regard to the abatement of one of the causes of this condition, and also asking for the co-operation of the profession throughout the United States.

WHEREAS, it can and has been shown, by ample statistics, that the American race is rapidly decreasing in its birth rate, thereby threatening ultimate and complete decadence of the race, and

WHEREAS, such decadence has become so apparent that it should claim the serious attention of those of influence and power to in any degree lessen this evil, and

WHEREAS, without a special effort to investigate, it must have been observed by the most indifferent with what flagrant violation of all sense of delicacy the public press gives place to advertisements of nostrums and means intended to prevent or cut short pregnancy; these advertisements appearing in a column of the paper set apart for such purpose under the name of "PERSONAL MEDICAL ADVERTISEMENTS," and referred as "Guarantees," Sure Relief," Sure Prevention," etc., occupying in some Sunday editions of reputable papers as much as two columns destined to fall into the hands of all classes, and

WHEREAS we recognize the press as a most potent factor in the education of the masses: be it

Resolved, by the Academy of Medicine of Kansas City, Mo., that we respectfully recommend that a censorship over the public press should be exercised to the end of correcting such practice of publishing advertisements as those referred to in our whereases. Be it further

Resolved, that it should be deemed of sufficient moment for the attention of the Post Office Department of the United States of America restricting or prohibiting the distribution of such papers, periodicals or magazines through the United States mail if they continue to so prostitute their columns with such matter. And be it further

Resolved, that a copy of these resolutions be sent every State Medical Association in the United States urging their co-operation in this movement by the adoption of these resolutions.

Resolved, that we request the Secretary of every State Medical Association adopting these resolutions to forward two copies, one to the American Medical Association and the other to the Postmaster General, petitioning for relief from this destructive influence.

JOHN W. KYGER, M. D.,
H. C. CROWELL, M. D.,
B. H. ZWART, M. D.
Committee.

PURITY IN THE LAY PRESS.

In recognition of the high standard recently adopted by the *Philadelphia Times*, as commented upon editorially in *American Medicine*, August 10, 1901, the Medico-Legal Society of Philadelphia has passed the following:

WHEREAS, The advertising of abortionists and their drugs as well as other disreputable secret medicines has for years been a notorious disgrace to the newspaperdom of this city—an evil seemingly without redress, and

WHEREAS, The *Philadelphia Times*, under its new ownership, has declared for a high ethical plane, avoiding all sensationalism, while at the same time furnishing "all the news that is fit to print," excluding all medical and other questionable advertisements, so as to make it indeed a newspaper fit for the family circle, therefore be it

Resolved, That the Medico-Legal Society of Philadelphia highly approves of the advance stand taken by the *Times*, and urges upon the medical profession generally its active support in aiding to carry out the journal's elevated ideals.

Resolved, Further, that the medical periodicals of this city be requested to publish the foregoing in their next issues, and that, at the coming meeting of this organization, the Secretary report as to which of these, by printing it, have assisted in furthering so desirable a public movement.

We desire to emphasize the above extracts, and to especially commend the *Philadelphia Times* as giving practical demonstration of its views on the question involved. The highest price is paid for space by unscrupulous medical advertisers. All honor to any journal, daily or otherwise, that excludes such from its columns. They should receive the substantial support of all right-minded citizens.

W. H. W.

BOOK REVIEWS.

Cohen—A System of Physiologic Therapuetics. Eleven octavo volumes. Cloth, $27.50 net. P. Blakiston's Son & Co., 1012 Walnut St., Philadelphia.

Volume IX. Hydrotherapy, Thermotherapy, Heliotherapy and Phototherapy, by Dr. Wilhelm Winterwitz, Professor of Clinical medicine in the University of Vienna, etc., assisted by Drs. Alvis, Strasser and B. Burham, and Balneology and Crounotherapy, by Dr. E. Heinric Kisih, Professor in University of Prange, etc. Translated by A. A. Eshner, M. D. Professor of Clinical Medicine in Philadelphia Polyclinic

The book also includes special chapters upon mineral waters in the United States, with indications and directions for use, by some eminent American writers.

This volume is especially interesting as it gives in detail the procedures in the various methods presented.

Objection has been made to the term "Physiologic Therapuetics." It, however, like some other words or terms in our vocabulary, while not strictly logical in construction, appears to have come to stay.

The non-medical treatment of disease has made wonderful strides in the past decade. Hypnotism, Christian Science, Faith Healing, Osteopathy, etc., have flourished simply because regular schools have so persistently ignored non-medicinal means. This system of rational Physiologic Therapeutics is designed to enlighten the profession upon the most useful of the various methods

of treating disease, other than drug giving. The volume before us is of great value to the general practitioner as well as to the specialist in this branch of therapy.

A new word has been coined—"Crounotherapy," or the use of mineral waters for drinking-cures.

The mineral springs in this and the old country are mostly listed, and the indications for each given, also their uses in baths.

In the use of chalybeate waters, the author states that "it appears that when the waters contain small amounts of iron in dilute form, the mineral is absorbed more readily than from waters containing large amounts." This supports the view we have long maintained, that large doses of any iron preparation are useless, if not harmful.

In speaking of the use of mineral waters in the treatment of diabetes,the author makes the statement that, "In the United States there are no waters of particular efficacy in the treatment of diabetes." Evidently the doctor was not conversant with some of the medicinal waters of this country, notably the Lincoln Spring of Saratoga, N. Y. We respectfully invite his attention to it.

A Manual of Osteopathy, with the Application of Physical Culture, Baths and Diet.

Compiled by Dr. Edward W. Goetz, Cincinnati, Ohio. Cloth, 171 pages, Illustrated. Price, $2.00 net.

This compilation gives a concise and intelligible exposition of Osteopathy. The methods of treatment are quite fully illustrated and explained in the text. Plates illustrating physical exercise are also given.

We are always ready to recognize the good in any system of treatment for the alleviation of human misery. All schools and pathics score more or less victories, but no one system may rightly or successfully claim the only proper method of treatment. This is the mistake made by the Osteopaths, the Faith Healers, the Christian Scientists, etc., etc.

None of these things are new. They are but renewals of ancient forms and methods, rehabilitated and given new names.

Osteopathy combines Swedish movements, massage, etc., under the new title. It does much good in many cases. We have seen it do much harm, also. The tendency is to give too severe and too prolonged treatments, which by the way, the author of this work deprecates. All such manipulation should be given only by one thoroughly and properly instructed and experienced, and who should have clean hands and a pure heart.

W. H. W.

PAMPHLETS RECEIVED.

The Treatment of Suppuration in the Uterine Appendages,also,The Half-Stitch Suture, a new suture for use in Anterior Colporrhaphy.

By Charles P. Noble, M. D., Philadelphia.

The Ultimate Results in Nephrorrhaphy. Same author.

From Ether to the Physiologic Unit. By George Adam, M. D., San Francisco, Cal.

This most interesting paper was read before the Medical Society of the State of California in April last. It will well repay a careful study of its contents.

W. H. W.

OPHTHALMOLOGY

In charge of A. J. TENNEY, M. D., Boston.

Dr. de Schweinitz advocates a preventive iridectomy in the unaffected eye when one eye has had glaucoma. Czermak also favors prophylactic iridectomy in monolateral cases.

Voges of Buenos Ayres describes an affection of the eye in cattle in Argentina, hitherto unrecorded. A large tumor destroys the eyeball, which is shown to be carcinomatous in character.

Schwarz, (*Medicine*) finds that nargol is more stable and less irritating in solutions of equal strength than protargol, and appears to be equally efficient. 20 and 30 per cent. solutions of nargol cause only moderate pain,and very slight injection.

Dr. L. Emmet Holt, (*Archives of Pediatrics*) reports a case of diphtheria of the conjunctiva in a child six months old. There was no membrane elsewhere. 2400 units of antitoxin were administered, ice compresses applied to the affected eye, and atropin instilled. The recovery was accomplished in ten days.

Dr. L. H. Taylor, (*Oph. Rec.*) cites a case of dislocation of the crystalline lens into the vitreous caused by the kick of a mule in the back of the head. The patient was a man 55 years old. The eye was otherwise uninjured, and made a perfect recovery, vision being 20-30.

Niesnamor has proved that corneal ulcers are improved by solar light thrown on the eye by means of a lens of eight dioptres and ten cm. in diameter, care being taken to exclude the heat rays by passing the light through water colored with methyl blue.

Dr. F. C. Heath, (*Annals of Oph.*) reports the case of a young woman who had amblyopia from carbon disulfid poisoning. She used this substance in splicing bicycle tires in a rubber factory. She was nervous, irritable, had mist before the eyes, insomnia, cramps, weakness and emaciation. The pupils were markedly dilated.

Dr. Hasket Derby, (*Bost. Med. and Surg. Jour.*) reports 26 cases of optic nerve atrophy treated by injections of strychnin in the temples. In fifteen cases there was no relief, the disease terminating in blindness; doubtful relief, 1; temporary relief, 2; relieved, 8. He begins with .04 gr., and increases the dose by .01 gr. daily. After ten days, the temples grow sensitive, when he waits ten days and then repeats the course.

Dr. Derby notes that Becker of Heidelberg used this method in a case of embolism of the central artery of the retina, and was awarded by a return of normal vision.

In 1873 von Hippel of Konigsberg published a list of cases of optic nerve atrophy, and wrote, "We possess in strychnin a drug which in many cases arrests advancing disease, and in others materially improves the much impaired vision."

Breuer (*Lancet*) operates for the relief of corneal astigmatism with a loop of fine platinum wire kept at a dull red heat. With this he makes a small punctiform burn in the limbs or in the cornea, burning through about half the thickness of the cornea. This is done at one or both extremities of the most hypermetropic meridian. He has been pleased with the apparently permanent benefit obtained.

Ollendorf, (*Zeitschrift fur Augenheilkunde*) inserted small discs of iodoform into the vitreous of rabbits through an incision behind the inser-

tion of the superior rectus without causing irritation. Prof. Haab inserted small rods of iodoform into the eyes of 23 cases in which the eyes were infected. In eight cases enucleation was necessary later. Romer of Wurzburg believes the remedy is of use only when the infection comes from the ordinary pyogenic microbes. He reports two cases of infection after injuries, where the eyes were saved; and one from infection by a peculiar bacillus after cataract extraction, where iodoform did no good.

MISCELLANEOUS.

SUMMER DIARRHEAS OF CHILDREN AND THEIR TREATMENT.

BY M. A. AUERBACH, PH. G., M. D., ASS'T. SURGICAL CLINIC, POST-GRADUATE HOSPITAL, MEDICAL INSPECTOR, DEPARTMENT OF HEALTH, NEW YORK CITY.

The importance of these, and some specialization in their symptoms demand a separate consideration. Three forms more or less distinct, can be recognized, viz., acute dyspeptic diarrhoea, cholera infantum, and acute entero-colitis.

ACUTE DYSPEPTIC DIARRHOEA.

This disease is chiefly due to errors in diet, which do not necessarily consist in the substitution of unnatural foods for the mother's milk. The mother's milk may be altered in quality by emotional causes, by improper food and improper hygiene. Or it may be caused by over-frequent nursing. More often however, it is caused by the ingestion of unnatural foods.

There are also pre-disposing influences which facilitate the action of the exciting causes. These are, especially dentition and the extreme heat of summer.

SYMPTOMS.

No symptoms may precede the diarrhœa, but usually there is the beginning restlessness with very slight fever. The restlesness may be due, and it is no doubt due to nausea or colicky pains or even both. Nausea may go on to vomiting or may not, but purging soon occurs. The stools are at first copious and very offensive, often yeasty and sour, and most always contain coagulated milk and particles of undigested food. Frequent at first, as the disease goes on they become more scanty and acquire a green color, containing at times mucus, but rarely blood. There may be anywhere from four to twenty or more stools in the twenty-four hours.

The prognosis of the aforesaid disease among the better class is commonly favorable, but among the weak, puny, and half starved children of our lower east side large numbers perish, especially during the summer months.

The old-time treatment in these cases was a primary purge, calcined magnesia, or castor oil. After the purge, bismuth sub-nitrate or prepared chalk was given. Since the introduction of Glyco-Thymoline (Kress) the above mentioned methods have been cast aside. A very good and effective prescription which has given me most splendid results in these kind of cases, in conjunction with a carefully restricted diet is

R. Bismuth Subnitrate	Dr. I
Tr. Opii Deodoratum	M. X
Glyco-Thymoline (Kress)	Oz. II
Aqua Rosarum Ad Q. S.	Oz. IV

Misce et

Sig. Dr. 1 q. 3 hrs.

(For a child one year of age.)

Cholera Infantum.

A VARIETY OF ACUTE CATARRHAL ENTERITIS OF INTENSE SEVERITY, CORRESPONDING IN SYMPTOMS AND COURSE TO CHOLERA MORBUS IN THE ADULT, BUT MUCH MORE SERIOUSS IN TERMINATION.

SYMPTOMS.

These consist in copious serous stools, at first containing some offensive fecal matter, later a few particles of greenish matter, but ultimately they are almost aqueous, ejected also with great force. Although the ejecta contain many bacteria yet no distinctive one has been discovered. There is also crampy pain and the limbs are either drawn up upon the abdomen or rigidly extended. There is decided fever about 105 degrees F., the pulse is frequent and feeble while restlessness is a characteristic symptom. The purging may come on suddenly or succeed dyspeptic diarrhoea or ilio-colitis.

Prognosis in these cases is at best not very favorable, although recovery is not impossible.

Treatment of these cases is of quite a different nature from those above mentioned. In the first place the fever must be combated and I know of no better method than a bath containing some Glyco-Thymoline (Kress), at about 80 degrees F., reduced by adding small pieces of ice to 70 degrees or 65 degrees. Next pain. 1-100th of a grain of morphine sulphate can be administered to a child of one year. Stimulation with strychnia hypodermically, iced champagne to prevent vomiting, brandy, whiskey, and other stimulants.

One of the best methods for irrigating the large intestine is by introducing a small soft catheter through the rectum and injecting into the bowel about a pint to a pint and a half of warm water containing about 25 per cent. of Glyco-Thymoline (Kress). This I find removes and prevents the re-accumulation of the fermentative as well as the putrefactive products of the bowel. Should however, the hyperpyrexia continue the douche may be given at a lower temperature. During convalescence great care must be taken in the feeding of the patient.

Acute Entro-Colitis is an affection of inflammatory nature more severe than dyspeptic enteritis, chiefly of the ileum and colon, affecting especially the lymph follicles. This like the preceding is a disease of the hot months of summer and the period of teething, especially. It is produced by the same causes as dyspectic diarrhœa. It is most frequent during the ages of 6 and 18 months. It likewise may be a termination of dyspeptic diarrhœa, or of cholera infantum.

The symptoms are much more severe and serious than dyspeptic diarrhœa, as it is evidenced by a higher fever. Vomiting is less common than in dyspeptic diarrhœa or cholera infantum. There is a decided abdominal pain and intense swollen belly. The stools are usually painful and small and may be extremely fetid. The urine is scanty and of high specific gravity. Relapses after convalescence frequently occur and hence, must be carefully guarded against.

Prognosis is less favorable in acute entero-colitis than in the other diarrhœas. Recovery, however, is not infrequent, even after a long period. Much depends upon the promptness with which treatment is instituted and the ability of the parents to carry it out, the previous vigor of the child, its hygiene and food.

TREATMENT.

The general surroundings and hygiene necessarily play an important part. The medical treatment, however, is somewhat different. Anodynes are more imperatively demanded because there is greater suffering, and depletion may be needed in the beginning by salines, though good judgment is required because the child's strength must be watched. The colon should be flushed with a solution of Glyco-Thymoline (Kress) having a strength of 25 per cent. This I find answers admirably in these cases. The solution may be made with iced water. The coming teeth should likewise be watched and the gums scarified whenever required.

THE TREATMENT OF SUPPURATION IN THE UTERINE APPENDAGES.

C. P. Noble (*American Medicine*, March 29, 1902) draws the following conclusions from his 200 operations:

The methods of dealing with suppuration of the uterine appendages have been greatly improved within the past fourteen years. The mortality has been reduced from more that 16 per cent. in the first half of this period to less than 5 per cent. in the second half.

This reduction in the mortality has been obtained by: 1. Abandoning abnormal section in the treatment of pyosapinx and abscess of the ovary when complicated by intraperitoneal abscess, and by substituting direct incision and drainage in this group of cases, and also for recent cases of pelvic suppuration of puerperal origin. 2. By substituting hysterectomy for oophorosalpingectomy for the removal of bilaeral suppuration in the uterine appendages.

These changes in methods of operation have permitted the developement of a much more perfect technic, which yields greatly improved results, remote as well as immediate. Ventral hernias, pedicle abscesses and troublesome intraperitoneal adhesions have become very rare instead of very frequent sequels of abdominal operations.

Free incision and drainage in cases of suppuration of the uterine appendages complicated by intraperitoneal abscess has proven to be a most valuable life-saving measure, yielding a mortality of less than 2 per cent. as contrasted with 27 per cent. from abdominal section. The remote results have been scarcely less gratifying, 32 of the 54 having been permanently cured.

Incision and drainage has proved to be a most conservative operation, not only in the saving of life, but in the conservation of the sexual organs. Of the fourteen patients in whom subsequently a radical abdominal operation was performed, in only three was it necessary to remove more than one uterine appendage. The substitution of incision for the radical operation has saved many young women from the annoyance of a premature manopause, and has enabled a number of them to bear children. Six pregnancies are known to have occurred, resulting in five children—one pair of twins, one miscarriage, and one pregnancy now developing.

Direct incision and drainage finds its best indication in : 1. Puerperal phlegmon. 2. Puerperal ovarian abscess, intraperitoneal abscess and pyosalpinx. 3. In complicated cases of pelvic suppuration of whatever origin, in which the pus is not contained with the ovary tube.

The value of direct incision is most

manifest in the worst class of cases, in which the patient is acutely ill from suppuration and peritonitis, and in which abdominal section gives its worst results.

A CONTRIBUTION TO OUR JUDGMENT OF CREDE'S SILVER PREPARATIONS.

BY DR. R. LEHMANN, OF DANZIG.

[From *Therapie der Gegenwart*, Berlin, March, 1902.]

A very corpulent woman of fifty-nine was wounded with a knife in the street, the lesion being upon the thigh a handbreadth under the symphysis, just missing the femoral artery, and opening a large varicosity of the saphenous vein. I found the woman in her house lying in a great lake of blood. After applying an immediate dressing I had her removed to my office, which was near by, where I cleansed the extremely dirty wound as well as I could, and sutured it after putting in a gauze drain. Nevertheless, I had to divide the sutures on the third day on account of suppurative inflammation, and treat the case with moist antiseptic dressings. The inflammation disappeared in a few days; but an inflammatory swelling developed at the same time right next to the vulva, which resisted all treatment, and soon became as large as a hen's egg. The conditions in the patient's home were extremely unfavorable for any operative procedure; and her size and restlessness were such that a dressing could hardly be kept in place for a single day. I therefore tried Unguentum Crede, inuncting about 3 grams (45 grains) daily over the surface of the tumor. It softened somewhat even as early as the second day, was less tender and red, and the skin covering it was less tense. A continuation of the treatment for three days more caused the tumor to disappear entirely. This case, like many others, is calculated to show the preeminent efficacy of the Crede ointment.

TOBACCO AND STERILITY.

Dr. Le Juge de Segrais, however, refers to a communication presented by Dr. Georges Petit, General Secretary of the French Anti-Tobacco Society, to the Congress of Scientific Societies in 1901 on changes in the organs of generation produced under the influence of tobacco. He made experiments on a number of animals—dogs, cocks, guinea-pigs, rabbits (male and female)—which were exposed to the action of tobacco smoke, fed with tobacco leaves, and treated with enemata of nicotine solution. In some cases acute intoxication was produced, and the testicles were found congested, the tubuli seminiferi being the seat of cell proliferation and epithelial desquamation. In other animals in which chronic intoxication had been produced the testes were the seat of a true atrophic sclerosis approximating to the cirrhotic type, the vesiculæ seminales were, as it were, withered, and no separmatozoa could be discovered. In the female rabbits the ovaries were shrunken and atrophied. These facts may, perhaps, help us to regard the war of the tobacco trusts with satisfaction as likely to result in a diminished consumption of tobacco.—*The British Medical Journal.*

DYSENTERY AND FLATULENCE.

The griping pain and flatulence which accompany bowel and stomach complaints, particularly during the heated term, are so readily overcome and controlled by the timely adminis-

tration of one or two Antikamnia & Salol Tablets, repeated every two or three hours, that it behooves us to call our readers' attention to the grand efficacy of this well-known remedy in these conditions. The above doses, are of course, those for adults. Children should be given one-fourth tablet for each five years of their age. When the attack is very severe, or when the disturbance is evidenced at or near the time of the menstrual period, we find it preferable to give two Antikamnia & Codeine Tablets, alternately with the Antikamnia & Salol Tablets. The latter tablets promptly arrest excessive fermentation and have a pronounced sedative effect on the mucous membranes of the bowels and stomach, and will check the various diarrhœas without any untoward effect.

COMPLETE ABSENCE OF VAGINA.

Samuel Johnson Stewart, M. D., Seattle, Washington, in *Medical-Sentinel* reports the case of Mrs. D., married, 28 years of age, of medium height; thin of flesh (masculine breasts and hips, vulva and clitoris normal, hymen absent; fourchette well developed; a cul de sac 2.8 c. m. in depth, apparently *formed* by the continued assaults of the male organ, exists in the location of the vaginal os.

Examination, under complete anæsthesia, per rectum, demonstrated the absence of the uterus, tubes and ovaries—a small nodule, about 2 c. m. in diameter, situated between the rectum and bladder seemed to represent the termination of the genital cord. The patient claims to have keen sexual desires; but signs of ovulation or menstruation are negative. Her temperament is decidedly of the nervous type, and her character, voice and face are quite juvenile.

THE URINE AS A DIAGNOSTIC FACTOR.

Dr. Kernode concludes an article with the above title with the following succinct rules, formulated by a Dr. Formad, and verified by many investigators:

1. Sediment in the urine has no significance unless deposited within twenty-four hours.

2. Albumin in the urine does not indicate kidney disease unless accompanied by tube casts. The most fatal form of Bright's disease—contracted kidney—has little or no albumin.

3. Every white crystal in urine, regardless of shape, is a phosphate, except the oxalate of lime crystal, which has its own peculiar form; urine alkaline.

4. Every yellow crystal is uric acid if the urine is acid, or a urate if the urine is alkaline.

5. Mucous casts, pus, and epithelium signify diseases of the bladder or cystitis of other parts of the urinary tract, as determined by variety of epithelium.

6. The urine from females can often be differentiated from the urine of males by finding in it the tessalated epithelium of the vagina.

7. Hyaline casts (narrow), blood, and epithelial casts signify acute catarrhal nephritis. There is much albumin in this condition.

8. Broad hyaline casts and epithelial dark-green granules and oil casts signify chronic catarrhal nephritis. At first, much albumin; later, less.

9. Hyaline and pale granular casts, and little or no albumin signify interstitial nephritis.

10. Broad casts are worse than narrow casts, for the former signify a chronic disease.

11. The urine should be fresh for a

microscopic examination, as the micrococci will change hyaline casts into granular casts or devour them entirely in a short time.

12. Uric acid may, in Trommer's test for sugar, form a peroxide of copper, this often misleading the examiner into the belief that he has discovered sugar. Thus, when urine shows only sugar, the other methods of examination must be used—preferably the lead test.

13. The microscope gives us better ideas of the exact condition of affairs in examination of urine than the various chemical tests.—*Tri-State Med. Jour.*

THE INTRAVENOUS INJECTION OF COLLARGOLUM (ARGENTUM COLLOIDALE CREDE) IN SEPTIC DISEASES.

BY DR. JOH. MULLER, OF BUTOW, POMMERANIA.

Abstracted from the "Deutsche Medicinische Wochenschrift" of March 13th, 1902).

The author says that the employment of Argentum Colloidale Crede (Collargolum), which has been used with such excellent effects in maladies which we were otherwise hopeless of combating, has long excited his vivid interest. With the exception of Crede's and Wenckebach's articles comparatively little has as yet appeared in literature. His own observations now include thirty cases; and the results of treatment have been so uniform, and often so striking, that he feels impelled to report them briefly. In almost all cases he administered the remedy as 1 per cent. intravenous injection. In his large country practice he was not able to observe the cases with the closeness which might be desirable; but after all the chief things were the results.

The first case was that of a woman forty-seven years old who came under treatment on June 25th, 1901 suffering from a severe bullous erysipelas dependent upon an abscess of the left side of the neck. The entire left side of the neck and face were affected. Twenty-four hours later the right side of the face and the right ear were involved. Not long before Dr. Muller had had a fatal case of erysipelas and he therefore instituted the Collargolum treatment injecting 5 grams (1¼ drams) into a superficial vein of the left arm. The temperature at that time (noon) was 39.9 degrees C. (103.8 degrees F.); in the evening it was 37.7 degrees C. (99.3 degrees F.) and next morning 36.7 degrees C. (98.1 degrees F.). The general condition had become good; the erysipelas stopped spreading and was cured in a few days.

Encouraged by this Dr. Muller on July 22d injected a boy of five suffering from a severe pneumonia in which the crisis had not occurred on the twelfth day with 2½ grams (37½ grains) of the Collargolum solution in the forenoon. In the evening the boy felt better, was interested in his playthings and the temperature had fallen. Next day there was renewed pyrexia; another injection was given; the temperature fell to normal and remained so. There was a rapid recovery.

On July 28th a girl of twelve suddenly fell sick with headache, chills, vomiting, stiffness of the neck, and somnolence. Next day there was opisthotonus and such rigidity of the spine that the patient had to lay upon her abdomen, spasm of the facial muscles, contractions of the extremites, etc., so that the diagnosis of epidemic cerebro-spinal meningitis was made. On the afternoon of July 31st, 4 grams (1

dram) of Collargolum solution were injected. The patient was quieter during the night following, and recognized her parents in the morning. A second injection was given. In the evening the sensorium was free, the temperature was normal,and the opisthotonus was relaxing, so that the patient could lie upon her back again. Rapid progressive improvement. But the paralysis of the muscles of deglutition lasted for eight days longer, so that tube nourishment was required. In this case, which appeared perfectly hopeless, both the physician and the parents were delighted with the results of the treatment.

The next case was a phlegmonous erysipelas occurring in a seventeen year old apprentice, starting from a wound of the leg, and involving the entire limb up to the inguinal region (August 8th). The process stopped even after the first injection,and two further ones caused it to retrogress completely. Only two small incisions of the skin first affected were required for the evacuation of pus.

Another more recent case was that of a woman of twenty-eight, who had a perimetritis with high fever and violent pain fourteen days post-partum. The exudation reached the height of the navel in a few days. The general condition was bad. On October 1st, the fourth day of the disease, she was given a Collargolum injection. The next night was a better one, the morning temperature was 37.7 degrees C. (99.3 degrees F.), and the general condition was markedly improved. Nevertheless, on account of the excessive sensitiveness of the patient and her distrust of the remedy, another injection was refused. A gynæcologist was called in consultation, who did not know Collargolum, and did not approve of its use; so that it was only by October 8th,when the exudation had extended to two finger-breadths above the navel, that Muller was allowed even to employ the silver salve. He personally inuncted twice daily 3 grams (45 grains) of the Unguentum Crede exactly according to rule; and after the fifth inunction there was a fall of temperature to the normal. In about a week and a half the exudation disappeared entirely.

All the other cases ran an almost similar course.

The Collargolum injections were employed in two other cases of perimetric exudation,one of parametric infiltration and in four of beginnng mastitis in which the fever disappeared four to eight hours after the first injection and the suppuration did not occur in any case. They were also used in an obstinate lymphangitis of the forearm, for which one injection sufficed; two panaritiums, in which one and two injections, respectively, were enough; and three phlegmons of the extremities, in which one or two injections were sufficient to prevent extension of the destructive process. Of course incisions were requisite in these as in the advanced panaritiums; but surgical interference is no longer our only means of coping with these affections. The injections were employed once in acute articular rheumatism; salicylic treatment for fourteen days gave no results, and two injections sufficed to cause the disease to disappear; in two pleurisies with effusion, where they caused defervescence of the fever and rapid disappearance of the exudate; and one facial erysipelas, in which one injection gave the desired result. There was one appendicitis, injected on the fourth day, with disappearance of the fever at once,and the exudation in a few

days; one severe general peritonitis,and one suppurative meningitis, in which the parents sent me word two days after the injection that the child, which was thirteen years old, had recovered consciousness. One appendicitis case received an injection upon the fourth day, causing marked lowering of the temperature and improvement of the general condition; on the four following days, because the temperature did not entirely disappear, especially at night, there was given a daily injection, which entirely removed the vomiting and meteorism, and greatly diminished the local tenderness; an abscess formed in Douglas' cul-de-sac, which broke spontaneously into the rectum on the ninth day. There were also two cases of phlegmonous angina.

Muller also used the Collargolum injections in two cases after resection of the ribs in consequence of empyæma, and found that the offensive odor rapidly disappeared, and recovery occurred much quicker than is usual. He employed it five times in a girl nine years old, who had a resection of the joints and various sequestrotomies done in consequence of a severe tuberculosis of both knees. This patient was emaciated almost to a skeleton,and had persistent fever; after the injections she recovered rapidly, and the wounds healed visibly under his eyes. In febrile (septic) tuberculosis of the lungs also Muller had twice employed the injections with thoroughly satisfactory benefits to the patients; the fever and night sweats stopped, the appetite improved, and the body weight increased.

With the exception of the chill which almost regularly occurs from one to four hours after the injection, Muller has seen no trouble occur from this method of employing the Collargolum, though his dosage, especially in children, has been very large.

On the basis of his very favorable experiences, which certainly cannot all have been due to accident, Muller has no doubt that the action of the Collargolum in septic processes is a specific one. He injects it in these diseases with the same confidence with which he employs antitoxin in diphtheria, and most earnestly recommends the further employment of the soluble silver by intravenous injection to his colleagues.

THE PROPOSED POST CHECK CURRENCY.

"Money is printed by the Treasury Department solely for the convenience of the people. The whole Department is owned by the people and is for the convenience of the people and, as the Postmaster General well suggests, if Congress says that the Post Check shall be established 'the executive officers of the government would find a way to carry into effect its provisions.' The duty of Congress is to take the matter up as Mr. Payne, Mr. Madden, and Mr. Castle have taken hold of it, to sift the matter to the bottom and, if it is found that the people are kept from the enjoyment of a great public convenience only by the inertia of certain public servants, the measure should become a law and the public servants should be directed to enforce its provision.

"Meanwhile it is gratifying to note that great progress has been made. The demands of the people for relief have been recognized by both the great Departments from which relief may be sought. It is no longer a question of whether or not relief shall be given but merely as to its form, details and com-

pleteness. If as much progress is made during the next session of Congress as has been made during the present session, the people will soon be able to transact the immense volume of small business passing through the mails with as little inconvenience as attends their other daily purchases. This can be brought about by the people instructing their representatives in Congress to enact the necessary law and direct the public servants to carry out its provisions."

BELLADONNA.

The indications for the use of belladonna as a remedy are as follows: Dullness of the mind; dull, expressionless face; full tongue, feeble voice; eyes partly open when asleep; impaired capillary circulation; poor respiratory power; the pupils are dilated or immovable; the patient is sleepy; drowsy, even bordering on stupor or coma; and everything points to the need of a cerebral and capillary stimulant. The tissues of the belladonna patient are usually pallid, doughy, and clammy; the head is swimming or dizzy. Somnolence, exhaustion and congestion are the guideboards pointing to its use as a remedy.—*Cin. Ec. Med. Jour.*

TROPHONINE.

This liquid food product of the laboratory of Messrs. Reed and Carmix of Jersey City is invaluable in all weakened conditions, but especially so when the stomach cannot retain nourishment. We have administered Trophonine for weeks in succession in such cases, with most satisfactory results.

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